

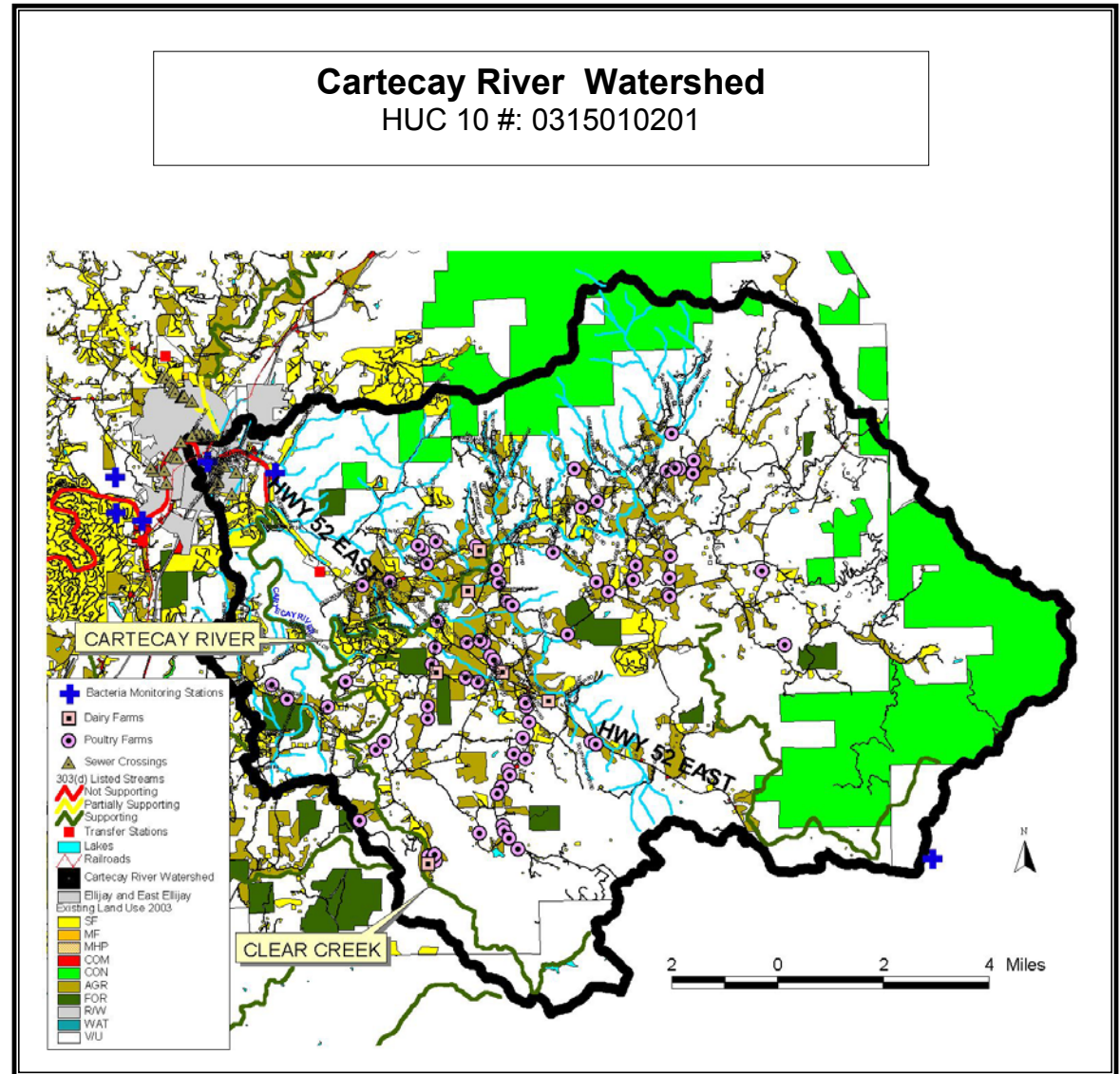
**STATE OF GEORGIA**  
**TIER 2 TMDL IMPLEMENTATION PLAN**      **REVISION 0**  
Cartecay River  
Coosawattee River/Coosa River Basin  
April 28, 2006

Gilmer County, Georgia

## I. INTRODUCTION

Total Maximum Daily Load (TMDL) Implementation Plans are platforms for evaluating and tracking water quality protection and restoration. These plans have been designed to accommodate continual updates and revisions as new conditions and information warrant. In addition, field verification of watershed characteristics and listing data has been built into the preparation of the plans. The overall goal of the plans is to define a set of actions that will help achieve water quality standards in the state of Georgia.

This implementation plan addresses the general characteristics of the watershed, the sources of pollution, stakeholders and public involvement, and education/outreach activities. In addition, the plan describes regulatory and voluntary practices/control actions (*management measures*) to reduce pollutants, milestone schedules to show the development of the management measures (*measurable milestones*), and a monitoring plan to determine the efficiency of the management measures.



**Table 1. IMPAIRMENTS**

| IMPAIRED STREAM SEGMENT | IMPAIRED SEGMENT LOCATION                              | IMPAIRMENT              |
|-------------------------|--|-------------------------|
| Cartecay River          | Owltown Creek to the Coosawattee River (Gilmer County) | Fecal Coliform Bacteria |

\* Plan will be written by GA EPD

## II. GENERAL INFORMATION ABOUT THE WATERSHED

Write a narrative describing the watershed, HUC 10 #: 0315010201. Include an updated overview of watershed characteristics. Identify new conditions and verify or correct information in the TMDL document using the most current data. Include the size and location of the watershed, political jurisdictions, and physical features which could influence water quality. Describe the source and date of the latest land cover/use for the watershed. Describe and quantify major land uses and activities which could influence water quality. See the instructions for more information on what to include.

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The Cartecay River is a tributary of the Coosawattee River. Actually, the Cartecay and Ellijay Rivers meet to form the Coosawattee River in the City of Ellijay. The river and most of the watershed are located within the southeast corner of Gilmer County, but there are small sections of the watershed in Fannin, Pickens, and Dawson Counties. Much of the river runs west to east near or along State Route 52. The Cartecay River is a HUC 10 watershed, which is 86,734 acres in total area. The major tributaries are Clear Creek in the southern portion of the watershed, Licklog and Owltown Creek in the northern and middle section of the watershed, and Anderson and Tickanetley Creeks in the far west forested land area of the watershed. The land is mostly undeveloped and forest. The headwaters of Cartecay River, especially in the east and north parts of the watershed are fairly steep terrain, much of which is in the Chattahoochee National Forest. Most of the rest of the watershed is rolling hills and smaller ridges. There are some flatter areas in the middle of the watershed and these areas are mostly apple orchards and other farmland.

There are 82 permitted poultry farms and 5 large cattle operations in the watershed. The number of poultry farms has grown rapidly in the area, especially in the southern portion of the watershed. There is single-family residential development throughout the watershed. Some is concentrated near the river and was built very close to the river before land and flood regulations. As the river flows toward the City of East Ellijay the development becomes more concentrated. About 1.5 miles from the city limits of East Ellijay the river is paralleled by State Route 52 on one side and residential development on the other. As the river continues to move toward East Ellijay and Ellijay the character of the land becomes more urban and the influences on the river are more urban in nature. Despite the relatively low development of the area, the steep slopes allow the bacteria within the watershed to run quickly into the river when it rains. The high fecal coliform bacteria counts are likely coming from a combination of agriculture, failing septic tanks, and urban land influences. There are some multifamily and mobile home parks that are built close to the river which may be contributing to the problem. Many of the houses throughout the watershed also may have inadequate septic systems or may even be running waste straight to the river. Current grant money has addressed four of these residences (2 straight pipes, 2 inadequate systems). USDA – NRCS and Georgia Soil and Water Conservation Commission has worked with farmers in this watershed on waste management; however, limited resources and the fast growth has made it difficult to keep up with all the farms. Through the NGRDC cost share grant program, one poultry waste stackhouse is complete and work is about to start for a cattle BMP project. There is a drinking water intake in Ellijay on the Cartecay River. A source water assessment has been done for the Cartecay River watershed. The source water assessment revealed that the bacteria pathogens from the combined 14 sewer crossing, 90 or more poultry and dairy operations, and all the septic systems in the area are a serious threat to that intake. The source water assessment rated these three threats as about the same with agriculture as slightly higher than the septic tanks or the sewer crossing. The local erosion and sedimentation control program (Gilmer County) has been updated to meet State requirements.

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## Cartecay River

**COMPLETE THE FOLLOWING TABLES FOR AND NARRATIVES ABOUT EACH IMPAIRED STREAM IN THE WATERSHED.**

| STREAM SEGMENT NAME | LOCATION   | MILES/AREA | DESIGNATED USE | PS/NS |
|---------------------|--|------------|----------------|-------|
| Cartecay River      | Owltown Creek to the Coosawattee River (Gilmer County) | 3          | Fishing        | PS    |

### III. SOURCES AND CAUSES OF STREAM SEGMENT IMPAIRMENT LISTED IN TMDLs

After reviewing the TMDLs written for this stream, complete the following tables with **the information found in the TMDLs**. List each parameter for which the stream segment is impaired and the water quality standard violated. See the instructions for the water quality standards. Describe the sources and causes of each violation identified in the TMDLs.

**Table 2. SOURCES OF IMPAIRMENT AS INDICATED IN TMDLs**

| PARAMETER 1                | WQ STANDARD  | SOURCES OF IMPAIRMENT  | NEEDED REDUCTION FROM TMDL |
|----------------------------|--|------------------------|----------------------------|
| Fecal Coliform<br>Bacteria | 1,000 per 100 ml (geometric mean Nov–April)<br>200 per 100 ml (geometric mean May–Oct) | Wildlife               | 49 percent                 |
| Fecal Coliform<br>Bacteria | 1,000 per 100 ml (geometric mean Nov–April)<br>200 per 100 ml (geometric mean May–Oct) | Agricultural Livestock | 49 percent                 |
| Fecal Coliform<br>Bacteria | 1,000 per 100 ml (geometric mean Nov–April)<br>200 per 100 ml (geometric mean May–Oct) | Urban Development      | 49 percent                 |
| Fecal Coliform<br>Bacteria | 1,000 per 100 ml (geometric mean Nov–April)<br>200 per 100 ml (geometric mean May–Oct) | Leaking Septic Systems | 49 percent                 |

#### IV. IDENTIFICATION AND RANKING OF POTENTIAL SOURCES OR CAUSES OF IMPAIRMENT

INVESTIGATE AND EVALUATE the sources of impairment for each parameter listed in Table 2. Write a narrative describing efforts made or procedures used to verify the significance and extent of the sources or causes of each impairment listed in the TMDLs. Include:

- Involvement of stakeholder group
  - Field surveys
  - Review of land cover data
  - Evaluation of sources
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Leaking Septic Systems: GIS coverages (road network, river and stream network, water quality data collection points) including land use data were utilized to help determine the extend of the residential development of the area (see front page map). This information was also complimented with high resolution, digitally rectified aerial photography recently published by the State (1999 data) were purchased for Gilmer County. These aerial photos were reviewed and analyzed for development and topographical information around the Cartecay River. U.S.G.S. topographic maps of the area were also utilized to show steep slopes, house, and stream locations. Many locations were driven to verify residential development influences. A site visit was conducted with one resident who does not currently have an approved septic system. Other leads were given for local resident about possible places without septic systems. Information was also obtained from Gilmer County TMDL Technical Advisory meetings about the area and from the source water assessment, which was done for the watershed.

Agricultural Livestock: NGRDC developed a poultry farm GIS coverage from an EPD agricultural permit spreadsheet. This spreadsheet was geocoded and then check through aerial photos and driven to improve the location accuracy of the farm. This coverage was developed and used for a previous Section 604 grant and this area was covered fairly well at that time. A site visit and interview was conducted with farmers and landowners who are part of the NGRDC grant share program. These individuals were also a valuable source of information on the area. Information was also obtained from Gilmer County TMDL Technical Advisory meetings about the area and from the source water assessment, which was done for the watershed.

Urban Development: GIS coverages were also used to determine urban development. GIS coverages such as sewer lines crossing streams, lift stations, and waste treatment plants, which were gathered from source water assessments were utilized. This information was also complimented with high resolution, digitally rectified aerial photography recently published by the State (1999 data) were purchased for Gilmer County. These aerial photos were reviewed and analyzed for development and topographical information around the Cartecay River. U.S.G.S. topographic maps of the area were also utilized to show steep slopes, house, and stream locations. Many locations were driven to verify residential development influences.

Wildlife: There is deer, bear, turkeys, and other small game located in that area. There are no known feral hogs in the area. However, it is not believed that any of the animals are in high population there and not likely a high contributor of the problem.

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To the extent possible, identify sources and quantify the extent of pollution in the stream segment for each of the parameters listed in Table 2 and evaluate the likely impact on the parameter load to the stream. This should follow research performed and described in preceding narrative and should correct or add information to the TMDLs. **The SOURCES SHOULD BE RANKED** from those having the most impact to those having the least impact. The estimated extent of contribution can be expressed as the area of the watershed effected, the stream miles effected, or the number of activities contributing to the problem. The magnitude of contribution should be estimated to be large, moderate, small, or negligible.

**Table 3. CONCLUSIONS MADE OF POTENTIAL SOURCES OF STREAM SEGMENT IMPAIRMENT**

| PARAMETER 1             | POTENTIAL SOURCES      | ESTIMATED EXTENT OF CONTRIBUTION  | ESTIMATED MAGNITUDE OF CONTRIBUTION | COMMENTS |
|-------------------------|------------------------|---|-------------------------------------|----------|
| Fecal Coliform Bacteria | Agricultural Livestock | Affects the middle two thirds of the watershed (15 miles).                                    | moderate                            |          |
| Fecal Coliform Bacteria | Leaking Septic Systems | Affects most first two thirds of the watershed (12 miles).                                    | moderate                            |          |
| Fecal Coliform Bacteria | Urban Development      | Affects the lower portion of the watershed where the river runs through the Cities (2 miles). | moderate                            |          |
| Fecal Coliform Bacteria | Wildlife               | Some throughout the watershed but not very concentrated.                                      | small                               |          |

## V. STAKEHOLDERS

PUBLIC INVOLVEMENT AND THE ACTIVE PARTICIPATION OF STAKEHOLDERS is essential to the process of preparing TMDL implementation plans and improving water quality. Stakeholders can provide valuable information and data regarding their community, impaired water bodies, potential causes of impairments, and management practices and activities which may be employed to reduce the impacts of the causes of impairment.

Describe outreach activities to advise and engage stakeholders in the TMDL implementation plan preparation process. Describe the stakeholder group employed or formed to address the impaired segments in the watershed. Summarize the results of the number of attendees and meetings and describe major findings, recommendations, and approvals.

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Three and a half years ago, the Gilmer County TMDL Technical Advisory Committee was formed to develop implementation plans for the Coosawattee River and several of its listed segments. This did not include the Cartecay River, a tributary to the Coosawattee River. All of the streams are listed for fecal coliform bacteria. The committee has met several times over the last three years on issues of TMDL implementation. Two years ago the group approved NGRDC to pursue a grant (EPA Section 104) to help with TMDL implementation in the Gilmer County. A grant was awarded and is being used for demonstration projects to cost share agricultural BMPs and repair failing septic tanks. The Committee felt these two things were the leading contributors to the fecal coliform bacteria problem in the Coosawattee River watershed. Another objective of the grant was to increase the stakeholder base for the watershed. An ad hoc Coosawattee River group was formed which included many of the active TMDL Technical Advisory Committee. This ad hoc group met regularly and applied for more grants for TMDL implementation in Gilmer County. This group was able to secure grants to expand the cost share program. Some of the members of the Gilmer County TMDL Technical Advisory Committee still met informally on occasion to discuss progress of the activities, implementation plans, and issues of monitoring the Coosawattee River.

The Gilmer County TMDL Technical Advisory Committee has met twice to formally discuss the development of an implementation plan for the Cartecay River and some other issues. The Committee met once on Monday, August 30, 2004 at 10:00 a.m. at the Gilmer County Library Meeting Room. At this meeting, there were seven committee members present, two NGRDC staff, and nine other interested individuals who have been involved with the ad hoc watershed group. The Committee reviewed changes to the format of implementation plans and reviewed land use and USGS monitoring data for the Cartecay River. Discussion at this meeting centered around load reduction and some of the group's activities in the watershed. The Committee met for a second time on Monday, September 20, 2004 at 10:00 a.m. at the Gilmer County Library Meeting Room. At this meeting, there were three committee members present, two NGRDC staff, and six others from the ad hoc watershed group. The Committee members again reviewed the land use map of the watershed. There was discussion about the order of the potential sources and their extent and magnitude. They agreed that agriculture, septic systems, and urban impact all contribute. Members provided information on the number of farms and the size of some of the operations. The members thought that inadequate septic systems/no septic system were a problem in the watershed. Committee members realized the importance of the urban land use in the cities as a possible contributor to the problem. They had many questions about the conditions of the sewer lines. There was discussion on where sampling has been and could be done in relation to land use. Committee members felt that sampling is important on the Cartecay River to isolate the problem, which they felt was coming from so many sources. Complete minutes of both meetings can be obtained through the offices of NGRDC.

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List the watershed or advisory committee members of the stakeholder group for this segment in the following table.

**Table 4. COMMITTEE MEMBERS**

| NAME/ORG                                   | ADDRESS  | CITY        | STATE | ZIP        | PHONE              | E-MAIL   |
|--|--|-------------|-------|------------|--------------------|--|
| Don Schneider<br>City of Ellijay           | Code Enforcement Officer<br>197 N. Main Street                                       | Ellijay     | GA    | 30540      | 706-635-4711       | <a href="mailto:codeenforce@ellijay.com">codeenforce@ellijay.com</a>                 |
| James Holloway<br>Gilmer County            | Building Inspector<br>#1 Westside Square   | Ellijay     | GA    | 30540      | 706-635-3406       | <a href="mailto:planning@ellijay.com">planning@ellijay.com</a>                       |
| Ray King                                   | Gilmer County Health Dept.<br>15 Dalton Street                                       | Ellijay     | GA    | 30540      | 706-635-6050       | <a href="mailto:benthostream@yahoo.com">benthostream@yahoo.com</a>                   |
| David Pierce                               | 209 Westpoint Drive, P.O. Box A  | Ellijay     | GA    | 30540      | 706-276-3200       |  |
| Sam Breyfogle                              | Temple Inland Forest<br>208 Springdale Drive   | LaGrange    | GA    | 30240      | 706-884-8077       |  |
| David Durgin<br>Coosawattee River Resort   | 634 Beaver Lake Drive<br>Unit 5140   | Ellijay     | GA    | 30540      | 706-276-1060       | <a href="mailto:ddurgin@crra.bis">ddurgin@crra.bis</a>                               |
| Debbie Royston                             | Georgia Forest Watch<br>15 Tower Street  | Ellijay     | GA    | 30540      | 706-635-8733       | <a href="mailto:debroyston@gafw.org">debroyston@gafw.org</a>                         |
| David Govus                                | 3709 Big Creek Road  | Ellijay     | GA    | 30540      | 706-276-2512       |  |
| Lee Kelley<br>Georgia Forestry Comm.       | Senior Forester<br>207 Foster Blvd.  | LaFayette   | GA    | 30728      | 706-638-5557       | <a href="mailto:lkelly@gfc.state.ga.us">lkelly@gfc.state.ga.us</a>                   |
| Keith Gilmer<br>Georgia Soil & Water Cons. | Regional Representative<br>Region 1 Office<br>700 East 2 <sup>nd</sup> Ave., Suite J | Rome        | GA    | 30161-3359 | 706-295-6131       | <a href="mailto:kgilmer@gaswcc.org">kgilmer@gaswcc.org</a>                           |
| Mitch King<br>U.S. Fish & Wildlife Service | 1875 Century Blvd.   | Atlanta     | GA    | 30345      |                    |  |
| Lu Ann Lackey<br>Carters Project Office    | U.S. Army Corps of Engineers<br>P.O. Box 96  | Oakman      | GA    | 30732-0096 | 706-334-2248       | <a href="mailto:luann.lackey@sam.usace.army.mil">luann.lackey@sam.usace.army.mil</a> |
| Emory DeBord<br>Ellijay-Gilmer W & S Auth. | P.O. Box 635   | Ellijay     | GA    | 30540      | 706-276-2202       | <a href="mailto:egcwsa@ellijay.com">egcwsa@ellijay.com</a>                           |
| Doug Towery/USDA - NRCS                    | 185 Wellborn Street, Box 3   | Blairsville | GA    | 30512      | 706-745-2794<br>x3 | <a href="mailto:doug.towery@ga.usda.gov">doug.towery@ga.usda.gov</a>                 |

In Appendix A, list the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

## VI. MANAGEMENT MEASURES AND ACTIVITIES

Describe any management measures or activities that have been put into place or will be put into place including regulatory or voluntary actions or other controls by governments or individuals that specifically apply to the pollutant that will help achieve water quality standards. Include who will be responsible for the measure, how it will be funded, the status, the date it will be or was initiated, and a short description of how effective the measure is or will be.

**Table 5. MANAGEMENT MEASURES AND ACTIVITIES**

### MEASURES APPLICABLE TO INDIVIDUAL PARAMETERS

| PARAMETER 1         | MEASURE   | RESPONSIBILITY   | DESCRIPTION   | SOURCE OF FUNDING           | STATUS   | ENACTED/IMPLEMENTED       | EFFECTIVENESS (Very, Moderate, Weak) |
|---------------------|---|--|---|-----------------------------|--|---------------------------|--------------------------------------|
| Fecal Coliform (FC) | Rules and regulations for on-site wastewater management | Gilmer County Environmental Health, Environmental Health Services  | Regulates through permits and inspections the installation and operation of all on-site wastewater management systems.  | Gilmer County               | Enforced, state regs. adopted by county                      | Latest amendments adopted | Very                                 |
| FC                  | Environmental Quality Incentives Program (EQIP)         | Natural Resources Conservation Service/Farm Services Agency (USDA) | Technical, educational and financial assistance for farmers to develop environmentally beneficial land use management ( ie Nutrient management plans, fencing livestock from streams) | Federal                     | Yearly sign-up for agricultural producers                    | 1997                      | Very                                 |
| FC                  | BMP, Outreach, Education                                | North Georgia RDC, USDA - NRCS, Gilmer Co. Health Dept.            | BMP projects to cost share to repair septic tanks and implement farm BMP, educate the public, and improve capacity within the Coosawattee River watershed.                            | EPA Section 104 (b) Grant   | In progress. Several projects completed and some in progress | 2002                      | Very                                 |
| FC                  | BMP, Outreach, Education                                | Georgia Water and Soil Conservation Commission, USDA -NRCS.        | Cost share to implement farm BMP's and education of farmers.  | EPA Section 319 Grant Funds | Just starting  | 2004                      | Very                                 |

| PARAMETER 1 | MEASURE                            | RESPONSIBILITY   | DESCRIPTION  | SOURCE OF FUNDING     | STATUS                                       | ENACTED/IMPLEMENT-ED           | EFFECTIVENESS (Very, Moderate, Weak) |
|-------------|------------------------------------|--|--|-----------------------|--|--------------------------------|--------------------------------------|
| FC          | BMP, Outreach, Education           | North Georgia RDC, Gilmer Co. Health Dept.                         | Cost share to repair failing septic systems  | EPA Section 319 Funds | Just starting                                | 2004                           | Very                                 |
| FC          | Source Water Assessment            | North Georgia RDC  | Contaminant inventory and intake susceptibility analysis   | EPD/ EPA              | Completed                                    | 2003                           | Moderate                             |
| FC          | Coosa River Basin Plan 1998        | Georgia EPD  | Program to protect, enhance, and restore the waters of the Coosa Basin by monitoring, regulating, allocating, and managing land uses in the river basin  | EPD                   | Done every 5 years                           | 1998, Will be done again soon. | Moderate                             |
| FC          | Stormwater General Permit          | Georgia EPD  | A General Permit for construction activities which disturb 5 acres or greater; includes site stabilization plans and comprehensive monitoring/reporting  | EPD                   | Active                                       | August 2000                    | Moderate                             |
| FC          | Conservation Reserve Program (CRP) | Natural Resources Conservation Service/Farm Services Agency (USDA) | Encourages farmers to convert highly erodable acreage to filter strips and riparian buffers to improve water quality and habitat   | USDA                  | Multi year contracts                         | 1985                           | Moderate                             |
| FC          | Wetland Reserve Program            | Natural Resources Conservation Service                             | Wetland restoration program  | Federal               | Little activity in NW GA                     | 1985                           | Weak                                 |
| FC          | EPA 319 Grants                     | Limestone Valley Resource Conservation and Development Center      | Finance ecosystem based technical assistance in Coosawattee Watershed (ie streambank stabilization, poultry litter storage/ composting, alternative on site sewage systems, pasture improvements, water recreational improvements) | Federal Grants        | Being replaced with other 319 grant projects |                                | Moderate                             |

| PARAMETER 1 | MEASURE   | RESPONSIBILITY                                 | DESCRIPTION  | SOURCE OF FUNDING | STATUS                 | ENACTED/IMPLEMENTED                         | EFFECTIVENESS (Very, Moderate, Weak) |
|-------------|---|--|--|-------------------|------------------------|---|--------------------------------------|
| FC          | Soil Erosion and Sedimentation Control Ordinance  | Gilmer County                                  | Rules and regulations for construction site stabilization. Updated to meet new EPD standards   | Gilmer County     | Active                 | Latest amendments adopted 2004              | Moderate                             |
| FC          | Land Development Review Process                   | Gilmer County                                  | Ensures compliance with Building Codes, Subdivision Regulations, Soil Erosion and Sediment Control, Environmental Protection Regulations, and Zoning Regs.                           | Gilmer County     | Active                 | 1996, Adopting new standards (Zoning) 2004. | Moderate                             |
| FC          | Environmental Conservation/Protection Regulations | Gilmer County                                  | Ordinances of DNR minimum standards for Water Supply Watershed Protection, Wetland Protection, Mountain Protection, and River Protection.  | DCA               | Active                 | Adopted all but River Protection in 2001    | Moderate                             |
| FC          | Training programs, etc                            | Georgia Soil and Water Conservation Commission | Provide training and technical assistance on erosion and sediment controls, BMP education, forestry complaint resolution, BMP monitoring   | State             | Ongoing                | January 1999 (updated manual)               | Moderate                             |
| FC          | Waste Composting Facility                         | Gilmer/Ellijay Water and Sewer Authority       | Gilmer/Ellijay Water and Sewer Authority proposes to construct a composting facility, which would accept and compost municipal sewage sludge, septic tank wastes, and poultry wastes |                   | On hold                | January, 2003                               |                                      |
| FC          | EPA 319 Grants                                    | Gilmer County Adopt-a-Stream                   | Increase public awareness of states non-point source pollution and water quality issues, help citizens collect quality water quality data, encourage partnerships                    | State EPD         | Some training sessions | January, 2003                               | Moderate                             |

| PARAMETER 1 | MEASURE   | RESPONSIBILITY   | DESCRIPTION  | SOURCE OF FUNDING                           | STATUS        | ENACTED/IMPLEMENTED | EFFECTIVENESS (Very, Moderate, Weak) |
|-------------|---|--|--|---|---------------|---------------------|--------------------------------------|
| FC          | Forestry BMP monitoring   | Georgia Forestry Commission  | Within watershed can conduct periodic aerial reconnaissance to observe recent forestry practices, conduct BMP audit, and recommend remediation where necessary   | State                                       | Some Activity | January, 2003       | Weak                                 |
| FC          | Conservation Reserve Program (CRP)  | Natural Resources Conservation Service/Farm Services Agency (USDA) | Increase awareness and training activity to encourage farmers to convert highly erodable acreage to filter strips and riparian buffers to improve water quality and habitat.   | Federal                                     | Ongoing       | January, 2003       | Moderate                             |
| FC          | Agricultural Outreach and Education   | NRCS – USDA, Ga S& WCC, and Gilmer Co. Extension Service           | Increase awareness, technical, and financial assistance for farmers to develop environmentally beneficial land use management (ie Nutrient management plans, fencing livestock from streams) in the watershed.                               | Federal, State, and Local Funds             | Ongoing       | January, 2003       | Very                                 |
| FC          | Inventorying and Repairing Sewer Line Leaks                                 | Gilmer/Ellijay Water and Sewer Authority                           | All the sewer lines in the Cities of Ellijay and East Ellijay have been inventoried for condition and broken lines will be repaired in phases based on need.   | Local                                       | Active        | 2004                | Moderate                             |
| FC          | Public education regarding maintenance of on-site waste management systems. | Gilmer County Board of Health, North Georgia RDC                   | Increase public awareness regarding proper maintenance of on-site sewage systems; consider establishing a publicly operated on-site sewage management entity with responsibility for education and training, system inspection, and repairs. | EPA Section 104 (b) grant and Gilmer County | On going      | January, 2003       | Very                                 |

## VII. MONITORING PLAN

The purposes of monitoring are to obtain more data, to determine the sources of pollution, to describe baseline conditions, and to evaluate the effects of management and activities on water quality. Describe any sampling activities or other surveys - active, planned or proposed - and their intended purpose. Reference the development and submission of a Sample Quality and Assurance Plan (SQAP) if monitoring for delisting purposes.

**Table 6. MONITORING PLAN**

| PARAMETER(S)<br>TO BE<br>MONITORED                         | ORGANIZATION  | STATUS<br>(CURRENT, PROPOSED,<br>PLANNED) | TIME FRAME    |                | PURPOSE<br>(If for delisting, date of SQAP<br>submission)                                 |
|--|---|---|---------------|----------------|---|
|  |   |   | START         | END            |   |
| Goldline Darter & Mussel Surveys                           | University of Tennessee, Chattanooga                  | Past, Current, and Planned                | 1992          |                | Surveys are currently being done for mussels and crayfish and have been done for darters. |
| Benthic Monitoring   | Georgia Forest Watch/SAMAB                            | Current                                   | 2003          |                | There is three active sites for benthic monitoring of the Cartecay River.                 |
| Various Parameters   | EPD/USGS  | Current                                   | Every 5 years |                | On-going monitoring for listing and de-listing streams                                    |
| Fecal Coliform Bacteria, Nutrient, & some basic parameters | Gilmer County TMDL Technical Advisory Committee/NGRDC | Proposed                                  | 2005          | 2008 or longer | De-listing/listing (SQAP 2004), source tracking, and monitoring effects of BMPs           |

## VIII. PLANNED OUTREACH FOR IMPLEMENTATION

List and describe outreach activities which will be conducted to support this plan and the implementation of it.

**Table 7. PLANNED OUTREACH**

| <b>RESPONSIBILITY</b>  | <b>DESCRIPTION</b>   | <b>AUDIENCE</b>   | <b>DATE</b>         |
|--|--|---|---------------------|
| NGRDC/Coosawattee River Group                                      | Educate citizens on watershed issues, inform them on what is currently being done, promote grant program, and see if there is interest in starting a watershed alliance.                                       | General public, farmers, business, students, and anyone interested in watershed issues. | November 2004       |
| NGRDC/Gilmer County Board of Health                                | Septic system workshop to educate the public in septic system maintenance and repair and promote septic system grant program.  | General public and septic system contractors  | Before January 2005 |
| NRCS – USDA and Ga S&WCC   | Increase awareness, technical, and financial assistance for farmers to develop environmentally beneficial land use management (ie Nutrient management plans, fencing livestock from streams) in the watershed. | Farmers   | On-going            |
| Natural Resources Conservation Service/Farm Services Agency (USDA) | Increase awareness and training activity to encourage farmers to convert highly erodable acreage to filter strips and riparian buffers to improve water quality and habitat .                                  | Farmers   | On-going            |
| Gilmer County Adopt-a-Stream                                       | Increase public awareness of states non-point source pollution and water quality issues, help citizens collect quality water quality data, encourage partnerships  | General Public  | On-going            |
| Georgia Soil and Water Conservation Commission                     | Provide training and technical assistance on erosion and sediment controls, BMP education, forestry complaint resolution, BMP monitoring   | Farmers   | On-going            |
| Georgia Forest Watch   | Conduct benthic monitoring using trained volunteers in the Coosawattee River watershed (three sites in the Cartcay River watershed)  | General Public  | On-going            |
| NRCS – USDA, Ga S&WCC, and Gilmer Co. Extension Service            | Conduct on-site and other workshops on farm BMPs   | Farmers   | On-going            |

## IX. MILESTONES/ MEASURES OF PROGRESS OF BMPs AND OUTREACH

This table will be used to **track and report progress of management measures including BMPs and outreach**. Record milestone dates for:

- accomplishment of management practices or activities      - outreach activities
- installation of BMPs

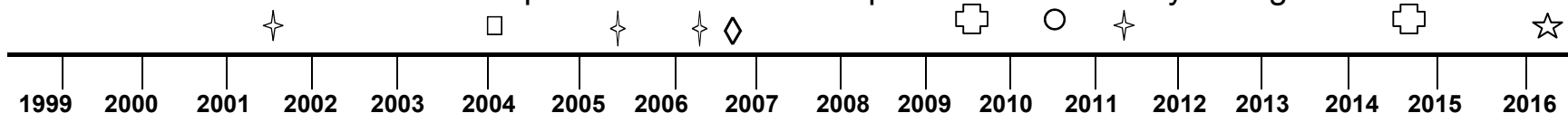
to attain water quality standards. Comment on the effectiveness of the management measure, how much support the measure was given by the community, what was learned, how the measure might be improved in the future, and any other observations made. This table can be "pulled out" of this template and used to report and track progress.

**Table 8. MILESTONES**

| MANAGEMENT MEASURE  | RESPONSIBLE ORGANIZATIONS                                   | STATUS   |           | COMMENT  |
|---|---|----------|-----------|--|
|   |   | PROPOSED | INSTALLED |  |
| Septic tank BMPs, Outreach, Education (Section 104 funds)                   | North Georgia RDC, USDA - NRCS, Gilmer Co. Health Dept.     | 2002     | 2005      | Two septic system repairs or two new systems will soon be complete. Septic system workshop and Coosawattee River open meeting will be promoted in the watershed.   |
| Agricultural BMPs, Outreach, Education (Section 104 funds)                  | North Georgia RDC, USDA - NRCS                              | 2004     | 2005      | One poultry stackhouse recently completed and BMPs on a cattle farm will be install soon. They will be encouraged to implement other areas of their nutrient management plans.   |
| Agricultural BMPs, Outreach, Education (EQIP and PL266)                     | Georgia Water and Soil Conservation Commission, USDA –NRCS  | 2004     | 2010      | Encourage area cattle and poultry farmers to develop nutrient management plan and cost share to implement those plans.   |
| Agricultural BMPs, Outreach, Education (Section 319 funds)                  | Georgia Water and Soil Conservation Commission, USDA –NRCS. | 2005     | 2010      | Develop nutrient management plans and cost share with farmers to implement poultry and cattle farm BMPs and education area farmers. Includes new full-time staff assistance.   |
| Septic tank BMP, Outreach, Education (Section 319 funds)                    | North Georgia RDC, Gilmer Co. Health Dept.                  | 2005     | 2008      | Will target this area for cost share projects to repair failing septic systems and install systems for landowners currently without one and will target the area to promote educational materials and workshops.           |
| Inventory and Repair Sewer Line Leaks in Cities of Ellijay and East Ellijay | Gilmer/Ellijay Water and Sewer Authority                    | 2004     | 2010      | All the sewer lines in the Cities of Ellijay and East Ellijay have been inventoried for condition and broken lines will be repaired in phases based on need. Leaky pipes in the Cartecay River watershed will be repaired. |

## PROJECTED ATTAINMENT DATE

The projected date to attain and maintain water quality standards in this watershed is 10 years from acceptance of the TMDL Implementation Plan by Georgia EPD.



- Scheduled EPD Basin Group Monitoring ★
- TMDL Completed □
- Revised TMDL Implementation Plan Accepted ◇
- Plan Status Evaluation Report ⊕
- Plan Update or Revision, if Necessary ○
- Project Attainment for Plans Prepared in 2006 ★

|                        |   |     |               |
|------------------------|---|-----|---------------|
| Prepared By:           | Karl Kreis                                |     |               |
| Agency:                | North Georgia Regional Development Center |     |               |
| Address:               | 503 West Waugh Street                     |     |               |
| City:                  | Dalton                                    | ST: | GA ZIP: 30720 |
| E-mail:                | wer@ngrdc.org                             |     |               |
| Date Submitted to EPD: | September 30, 2004                        |     | Revision: 0   |

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APPENDIX A.

STAKEHOLDERS

List the names, addresses, telephone numbers, and e-mail addresses for local governments, agricultural or commercial forestry organizations, significant landholders, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

| NAME  | AGENCY  | ADDRESS  | CITY        | STATE | ZIP        | PHONE  | EMAIL  |
|---|---|--|-------------|-------|------------|--|--|
| Larry Bosch<br>Karl Kreis                         | North Georgia Regional Development Center     | 503 West Waugh Street                              | Dalton      | GA    | 30720      | 706/272-2300                                 | <a href="mailto:dceds@nrhc.org">dceds@nrhc.org</a><br><a href="mailto:wer@nrhc.org">wer@nrhc.org</a>   |
| Bill White<br>Stacy Clark                         | Georgia Soil and Water Conservation Committee | PO Box 8024  | Athens      | GA    | 30603      | 706/542-3065                                 | <a href="mailto:bwhite@gaswcc.org">bwhite@gaswcc.org</a><br><a href="mailto:sclark@gaswcc.org">sclark@gaswcc.org</a>   |
| Rozier Wingate                                    | Limestone Soil and Water Conservation         | 590 Wingate Drive                                  | Ellijay     | GA    | 30540      | 706/276-3432                                 | <a href="mailto:oldorchard@ellijay">oldorchard@ellijay</a>   |
| Doug Towery<br>District Conservationist           | USDA-NRCS                                     | 185 Wellborn Street, Box 3                         | Blairsville | GA    | 30512      | 706/745-2794<br>x3                           | <a href="mailto:doug.towery@ga.usda.gov">doug.towery@ga.usda.gov</a>   |
| Jimmy Bramblett                                   | USDA-NRCS / UGA                               | 355 East Hancock Ave                               | Athens      | GA    | 30601      | 706/546-2073                                 | <a href="mailto:jimmy.bramblett@ga.usda.gov">jimmy.bramblett@ga.usda.gov</a>   |
| Ray King  | Gilmore County Department of Health           | 15 Dalton St.                                      | Ellijay     | GA    | 30540      | 706/635-6050                                 | <a href="mailto:benthostream@yahoo.com">benthostream@yahoo.com</a>   |
| Doug Cabe   | Limestone Valley RC&D                         | 125 Red Bud Road, Suite 7                          | Calhoun     | GA    | 30701      | 706/625-7044                                 | <a href="mailto:lvrcd@pointlink.net">lvrcd@pointlink.net</a>   |
| Debbie Royston                                    | Georgia Forest Watch                          | 15 Tower Road                                      | Ellijay     | GA    | 30540      | 706/635-8733                                 | <a href="mailto:katherineg@gafw.org">katherineg@gafw.org</a>   |
| Larry Benson<br>Chief Ranger Sr.                  | Georgia Forestry Commission                   |  |             | GA    |            | 706/635-2363                                 | <a href="mailto:gilmerunit@gfc.state.ga.us">gilmerunit@gfc.state.ga.us</a>   |
| William Grizzle                                   | North Ga Health District                      |  | Dalton      | GA    |            |  |  |
| Robin Goodloe                                     | US Fish and Wildlife                          |  |             | GA    |            |  | <a href="mailto:Robin_Goodloe@fws.gov">Robin_Goodloe@fws.gov</a>   |
| Emory DeBord                                      | Ellijay - Gilmore Water and Sewer Authority   | 216 Sailors Drive, Suite 115                       | Ellijay     | GA    | 30540      | 706/276-2202                                 | <a href="mailto:egcwsa@ellijay.com">egcwsa@ellijay.com</a>   |
| Vince Williams                                    | Georgia Environmental Protection Division     |  |             | GA    |            |  | <a href="mailto:vince_williams@dnr.state.ga.us">vince_williams@dnr.state.ga.us</a>   |
| Steven Blackburn<br>Curry Jones<br>Connie Roberts | Environmental Protection Agency, Region 4     | Sam Nunn Federal Center<br>61 Forsyth Street, S.W. | Atlanta     | GA    | 30303-3104 | 404/562-9397<br>404/562-9302<br>404/562-9406 | <a href="mailto:blackburn.steven@epa.gov">blackburn.steven@epa.gov</a><br><a href="mailto:jones.curry@epa.gov">jones.curry@epa.gov</a><br><a href="mailto:roberts.connie@epa.gov">roberts.connie@epa.gov</a> |
| Lu Ann Lackey<br>Park Manager                     | US Army Corps of Engineers                    | PO Box 96  | Oakman      | GA    | 30732-0096 | 706/334-2248                                 | <a href="mailto:luann.lackey@sam.usace.army.mil">luann.lackey@sam.usace.army.mil</a>   |
| Paul Johnson                                      | Southeast Aquatic Research Center             |  |             | GA    |            |  |  |
| Bud Freeman                                       | University of Georgia Institute of Ecology    |  |             | GA    |            |  | <a href="mailto:bud@trout.ecology.uga.edu">bud@trout.ecology.uga.edu</a>   |

|   |  |   |              |    |                |              |  |
|---|--|---|--------------|----|----------------|--------------|--|
| John Peacock<br>Agricultural Manager    | Georgia Department of Agriculture<br>Livestock/Poultry Section | GA Department of Ag<br>19 Martin Luther King Jr.<br>Dr., SW, Room 112 | Atlanta      | GA | 30344-<br>4201 | 404/656-3665 | jpeacock@agr.state.ga.us   |
| Abit Massey President<br>Mike Giles, VP | Georgia Poultry Federation                                     | P.O. Box 763  | Gainesville  | GA | 30503          | 770/532-0473 | <a href="mailto:mike@gapf.org">mike@gapf.org</a>   |
| Dana Skelton                            | Georgia River Network  | 1090 S. Milledge Ave.   | Athens       | GA | 30605          | 706/549-4508 | <a href="mailto:dana@garivers.org">dana@garivers.org</a>   |
| Jim Shinall                             | U.S. Army COE  | P.O. Box 487  | Cartersville | GA | 30120          | 678/721-6716 | <a href="mailto:james.t.shinall@sam.usace.army.mil">james.t.shinall@sam.usace.army.mil</a>       |
| Clayton Jones                           | Coosa River Basin Initiative                                   | 408 Broad St.   | Rome         | GA | 30161          | 706/232-2724 | <a href="mailto:claytonjones@coosa.org">claytonjones@coosa.org</a>                               |
| Ted Gregory                             | U.S. Army COE  | P.O. Box 96   | Oakman       | GA | 30732          | 706/334-2248 | <a href="mailto:edward.c.gregory@sam.usace.army.mil">edward.c.gregory@sam.usace.army.mil</a>     |
| James L. Holloway                       | Gilmore County Planning Commissioner                           | #1 Westside Square  | Ellijay      | GA | 30540          | 706/635/3406 |  |
| Ruth Caudell                            | Ellijay City Council   | 167 Gartrell Street   | Ellijay      | GA | 30540          | 706/635-4447 | <a href="mailto:rhcaudell@ellijay.com">rhcaudell@ellijay.com</a>                                 |
| William Grizzle                         | North Georgia Health District                                  | 100 West Walnut Ave., Suite 92  | Dalton       | GA | 30720          | 706/272-2342 | <a href="mailto:whgrizzle@gdph.state.ga.us">whgrizzle@gdph.state.ga.us</a>                       |
| Louise Hamiulo                          | North Georgia Health District                                  | 100 West Walnut Ave., Suite 92  | Dalton       | GA | 30720          | 706/272-2342 | <a href="mailto:lwhumiulo@gdph.state.ga.us">lwhumiulo@gdph.state.ga.us</a>                       |
| Terry Hanzak                            | Georgia Soil and Water Conservation Committee                  | 4310 Lexington Dr.  | Athens       | GA | 30603          | 706/542-9692 | <a href="mailto:thanzak@gaswcc.org">thanzak@gaswcc.org</a>                                       |
| Frank Sagona                            | Conasauga River Alliance                                       | 183 Greystone Drive , GA  | Ringgold     | GA | 30734          | 706/965-7069 | <a href="mailto:fsagona@aol.com">fsagona@aol.com</a>   |
| Robin Dake                              | Upper Etowah River Alliance                                    | Rt. 2, Box 104<br>W. Silver Shoals Rd                                 | Eastanollee  | GA | 30538          | 706/779-5756 | <a href="mailto:robintdake@hotmail.com">robintdake@hotmail.com</a>                               |
| Michelle Huffman                        | Georgia Environmental Protection Division                      |   |              | GA |                | 404/675-1641 | <a href="mailto:michelle_huffman@mail.dnr.state.ga.us">michelle_huffman@mail.dnr.state.ga.us</a> |
| April Ingle                             | Georgia River Network  | 1090 S. Milledge Ave.   | Athens       | GA | 30605          |              | <a href="mailto:ingle@garivers.org">ingle@garivers.org</a>                                       |
| Michael Wheeler                         | Gilmer County Extension Service                                | 92 Sand Street  | Ellijay      | GA | 30540          | 706/635-4426 | <a href="mailto:wheelerm@uga.edu">wheelerm@uga.edu</a>   |
| John Loughridge                         | GA Soil & Water Conservation Commission                        | 142 Sand Street   | Ellijay      | GA | 30540          | 706/635-4416 | <a href="mailto:John.loughridge@ga.usda.gov">John.loughridge@ga.usda.gov</a>                     |
| Katie Owens                             | Coosa River Basin Initiative                                   | 408 Broad Street  | Rome         | GA | 30161          | 706/232-2724 | <a href="mailto:keady@coosa.org">keady@coosa.org</a>   |
| Elizabeth Andrew                        |  | 12025 Doublehead Gap Rd   | Ellijay      | GA | 30540          |              |  |
| Gary Beisser                            | GA WRD - Fisheries   | 312 N River Street  | Calhoun      | GA | 30701          | 706/624-1161 | <a href="mailto:gary_beisser@dnr.state.ga.us">gary_beisser@dnr.state.ga.us</a>                   |
| Mack Wood                               | Land Development   |   | East Ellijay | GA |                |              |  |
| Mary Gazaway                            | Georgia EPD/ TMDL Implementation Program                       |   | Atlanta      | GA |                | 404/675-1745 |  |

**APPENDIX B.**

**UPDATES TO THIS PLAN**

Describe any updates made to this plan. Include the date, section or table updated, and a summary of what was changed and why.

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